IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences

In re the Application of

Magnus N. NILSSON et al.

Group Art Unit: 1732

Serial No.: 09/964,838

Examiner: M. Fontaine

Filed: September 28, 2001

For: A PROCESS FOR THE MANUFACTURE OF SURFACE ELEMENTS

APPEAL BRIEF

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I. Real Party in Interest

The real party in interest is the assignee of the inventors, Pergo (Europe) AB., a company of Sweden, having a principal address of Strandrigdaregatan 8, Trelleborg, Sweden S-23125.

II. Related Appeals and Interferences

There are no related appeals or interferences known to Appellants, Appellants' legal representative or the assignee, which will directly affect, or be directly affected by, or have a bearing on, the Board's decision in the pending appeal.

III. Status of Claims

This is an appeal from the Final Rejection of claims 1 and 26-58.

IV. Status of Amendments

No amendments after the Final Rejection have been made.

V. Summary of Claimed Subject Matter

The invention, as embodied in the claims on appeal, is directed to a process for manufacturing a decorative surface element, the element being formed from a base layer, a decor and a wear layer of UV or electron beam curing lacquer (Specification, paragraph [0006]).

The invention as recited by the sole independent claim (claim 1) includes three steps. In the first step, embossing surfaces, located on one or more structured rollers or molds, are positioned atop the lacquer UV or electron beam curing lacquer (Specification, paragraph [0006]).

In the second step of the method, the lacquer is provided with a surface structure, by pressing the rollers or molds into the lacquer. This step enhances the decorative effect of the decor (Specification, paragraph [0008]).

Finally, the wear layer is completely cured (Specification, paragraph [0008]).

VI. Grounds of Rejection

Claim 1 stands rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. (U.S. Patent No. 4,092,198) in view of Schmoock (U.S. Patent No. 5,344,692).

Claims 26-30 and 39 stand rejected under 35 USC § 102(e) as allegedly being unpatentable over Scher et al. and Schmoock, in further view of MacQueen et al. (U.S. Patent No. 6,399,670).

Claims 32, 40, 41, 43, 51 and 52 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al.

Claims 33, 34, 45, 50 and 56-58 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. in view of Petry (U.S. Patent No. 3,196,030).

Claims 35-38 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. in view of Eby et al. (U.S. Patent No. 5,961,903).

Claim 31 stands rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. in view of Nishimura et al. (U.S. Patent No. 4,216,251).

Claims 42 and 53 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. in view of Schmid et al. (U.S. Patent No. 5,804,116).

Claim 44 stands rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. in view of Greten et al. (U.S. Patent No. 5,498,309).

Claims 46 and 55 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. and Petry, in further view of Schmid.

Claims 47-49 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. in view of James et al. (U.S. Patent No. 6,354,915).

Finally, claim 54 stands rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. and Greten, in further view of Schmid.

VII. Arguments

A. Claims 26-30 and 39

Claims 26-30 and 39 stand rejected under 35 USC § 102(e) as allegedly being unpatentable over Scher et al. and Schmoock, in further view of MacQueen et al. However, this rejection is clearly improper as it is necessary to combine teachings of multiple references to make the proposed anticipatory rejection.

It is a matter of commonly accepted patent law that in order to anticipate a claim under 35 USC § 102, a single reference must teach each and every feature of the claim. See, e.g., MPEP § 706.02IV. Thus, this rejection is improper.

B. Claim 1

Claim 1 stands rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. in view of Schmoock. The Office Action asserts Scher et al. teaches each element of the claim, except for "using a UV curable resin in his decorative surface element." The Office Action relies upon Schmoock for its alleged teaching that this reference "shows that it is known to carry out a method for making a decorative surface element using a layer of UV-curing lacquer."

The Examiner alleges that "Scher shows that it is known to carry out a method for the manufacture of a decorative surface element." However, the Examiner concedes that "Scher does not show using a UV-curable resin in his decorative surface element."

The Examiner relies on Schmoock for the allegation that "Schmoock shows that it is known to carry out a method for making a decorative surface element using a layer of UV-curing lacquer (citing column 4, lines 11-13)." The Examiner continues that Schmoock and Scher et al. are combinable because they are concerned with a similar technical field, mainly that of methods and making decorative surface elements that have structured surfaces.

Applicants note that Schmoock relates to a flexible laminate comprising a low-grade or damaged leather substrate which comprises a non-crosslinked thermoplastic which is flowable in response to heating (See, for example, Claim 1). Although the Examiner specifically mentions column 4, lines 11-13 of Schmoock, there it is only mentioned that it is impossible to employ an inner-layer which consists of or contains a lacquer and is hardened as a result of exposure to ultra-violet (UV) radiation. The Examiner states that the above two references (i.e., Scher et al. and Schmoock) are combinable because they are concerned with a similar technical field, namely that of method of making decorative surface elements that have structured surfaces.

Applicants point out that the proposed combination of the two references for the reasons set forth in the Office Action fails to establish a *prima facie* case of obviousness. These references are not directed to a similar or same technical field and, indeed, Schmoock relates to a totally different technical field, namely a flexible laminate comprising a low-grade or damaged leather, where the unevenness of one side of the substrate is coated with a thermoplastic material, which is flowable at 110°-130° (See, claim 1). Moreover, the Examiner alleges that Scher et al. teaches "a base layer, a decor layer of lacquer and a wear layer (citing the Abstract), page 2, lines 13-14. However, in the claimed invention, the lacquer is the wear layer.

Unlike the invention claimed in independent claim 1, there is no wear layer of a UV or electron beam curing lacquer on top of the leather laminate of Schmoock. Instead, column 4, lines 11-13 relied upon by the Examiner mentions that an inner layer, which consists of or contains a lacquer is hardened as a result of exposure to ultra-violet radiation may be used. Thus, it is clear that it is not a top layer (wear-layer) in Schmoock but, rather, Schmoock only concerns a leather product containing a thermoplastic material which has nothing in common with the present decorative surface element with a specific thermosetting wear layer on top, i.e., a UV or electron beam curing lacquer. Applicants respectfully submit that it is improper for the Examiner to disregard the teachings of Schmoock concerning low-grade leather combined with a thermoplastic material and merely pick out two isolated lines in column 4 as being of the same type of surface or product as being produced by Scher et al. In any event, the teachings of Schmoock at column 4, lines 11-13, do not refer to a wear layer (on top), but, rather, an inner

layer as mentioned above. Thus, the combination of Scher et al. and Schmoock would still not teach nor make obvious the invention as claimed in independent claim 1.

In the Advisory Action of May 24, 2005, the Examiner states that simply because Scher et al. and Schmoock are "concerned with making decorative laminates," it is proper to combine these references. However, one of ordinary skill in the art of high pressure laminates, comprising a thermosetting resin (the invention of Scher et al.) for the purpose of forming surfaces such as"counter and table tops, bathroom and kitchen work surfaces, furniture and cabinet surfacing, wall paneling and paritionings, doors, etc." (col. 1, lines 27-30), would certainly not look to flexible laminates, exhibiting the characteristics of leather, and comprising thermoplastic resin (the invention of Schmoock). *See* MPEP § 2143.01 (citing *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993), *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000), *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992)).

C. Claims 31, 40, 41, 43, 51 and 52

Claims 31, 40, 41, 43, 51 and 52 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. et al. The Examiner has asserted that Scher et al. expressly teaches or suggests each recited feature of each of the rejected claims.

Each of these claims depend from claim 1, and therefore necessarily include, "a wear layer of a UV or electron beam curing lacquer." However, in the Office Action of January 25, 2005, the Examiner admits that "Scher does not show using a UV curable resin in his decorative surface element." Thus, as Scher et al. does not expressly teach or suggest such a feature, Scher et al. cannot, alone, establish a *prima facie* case of obviousness.

In other words, as the claims depend (directly or indirectly) from claim 1, it is not proper for the Examiner to reject the dependent claims over Scher et al. alone when the independent claim must be rejected over the combination of Scher et al. in view of Schmoock. For the foregoing reasons, this rejection is untenable and cannot stand.

Notwithstanding the foregoing arguments, Applicants respectfully submit that as the dependent claims include all the limitations of independent claim 1, they are allowable for the reasons set forth in Section VII.B above.

More specifically, the dependent claims present additional limitations not taught by Scher et al. alone. For example, with regard to claim 32, the Examiner concedes that Schmoock "does not specifically use glazing rollers" (as the incorrect citation to Scher et al. was corrected by the Advisory Action). However, there is no additional reference to show why it would have been obvious to one of ordinary skill in the art at the time the invention was made to use glazing rollers as instantly claimed. In fact, Schmoock teaches that the "surface 33 of the outer stratum 13 are treated with an embossing roll" (col. 12, lines 16-19, emphasis added) to provide the surface with a varying structure. Such a teaching would not motivate to one of ordinary skill in the art to replace the device providing the varying structure with a glazing roller, i.e., a device which has a different effect - providing a glaze to the structure.

With regard to the rejection of claim 41, Applicants note that claim 41 is dependent on claim 39, which is not rejected over Scher et al. alone or Scher et al. in combination with Schmoock. Thus, claim 41 cannot be rejected over Scher et al. alone as instantly set forth. With regard to claim 40, Applicants note that claim 40 is dependent on claim 32, which recites the process of the glazing roller. As with the deficiencies of Scher et al. as to claim 32, the Examiner also concedes with regard to claim 40 that "he [Scher] does not specifically use glazing rollers . . . ." Accordingly, in the absence of any secondary reference showing the use of glazing rollers, the Examiner has not established a *prima facie* case of obviousness that would have motivated one skilled in the art to modify the teachings of Scher as proposed in the rejection.

As Scher et al. does not teach the use of glazing rollers, it would not have been obvious to have the spacing distance between glazing roller and a corresponding counterstay, as set forth specifically in the limitations of claim 43. Furthermore, as claims 51-52 further specify the distance between a structured roller and a corresponding counter stay, the Examiner has not provided any teaching for the ranges recited therein so as to establish a *prima facie* case of obviousness for the claimed invention. All rejections of claims 32, 40-41, 43 and 51-52 as being unpatentable under §103(a) over Scher et al. cannot stand.

D. Claims 33, 34, 45, 50 and 56-58

Claims 33, 34, 45, 50 and 56-58 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. in view of Petry. Initially, as Petry fails to cure the deficencies of Scher et al. alone, as described in Section VII.C above, Applicants respectfully submit that this rejection must fail.

Applicants additionally note that claims 33-34, 45, 50 and 56-58 are directly or indirectly dependent upon claim 1 and, thus, include all the features recited therein. As the Examiner has not rejected claim 1 over Scher et al. alone, it is impossible to sustain a rejection against these dependent claims on the combination of Scher et al. in view of Petry where claim 1 - from which they depend - is not rejected over the proposed combination of Scher et al. and Petry.

Notwithstanding the above, it is further noted that although claim 34 specifically recites the surface temperature of the glazing rolls, Applicants again note the Examiner's admission that "Scher does not show using a UV-curable resin in his decorative surface element" as well as that "he [Scher] does not specifically use glazing rolls" and, thus, these limitations, incorporated by reference into each of the dependent claims (35 U.S.C. §112, 4th paragraph), are not met by the proposed combination of Scher et al. and Petry. Accordingly, this rejection is not proper.

E. Claims 35-38

Claims 35-38 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. in view of Eby et al.

Like the rejection discussed in Section VII.D, claim 35 is directly dependent on claim 1 and the other claims are indirectly dependent on claim 1. Accordingly, the limitations of claim 1 are present, directly or indirectly, in each of these dependent claims. Because the combination of Scher et al. with Eby et al. does not cure the deficiency admitted by the Examiner in Scher et al., i.e., the failure of "Scher does not show using a UV-curable resin in his decorative surface element," the proposed combination of Scher et al. and Eby et al. cannot possibly establish a *prima facie* case of obviousness for claims 35-38. Accordingly, this rejection cannot stand.

F. Claims 31, 42, 46-49, and 53-55

Claim 31 stands rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. in view of Nishimura et al. Claims 42 and 53 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. in view of Schmid et al. Claim 44 stands rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. in view of Greten et al. Claims 46 and 55 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. and Petry, in further view of Schmid. Claims 47-49 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. in view of James et al. Claim 54 stands rejected under 35 USC § 103(a) as allegedly being unpatentable over Scher et al. and Greten, in further view of Schmid.

Similarly, the other rejections over Scher et al. in view of Nishimura et al, Scher et al. in view of Schmid et al., the rejection of claims 46 and 55 over the combination of Scher et al. and Petry, further in view of Schmid or, alternatively, the rejection of claims 47-49 as unpatentable over Scher in view of James et al. must fail.

As in the other rejections, Scher et al. is acknowledged by the Examiner to have a deficiency in that "Scher does not show using a UV-curable resin in his decorative surface element." Moreover, there is not even the allegation that any reference teaches a UV-curable lacquer wear layer. Accordingly, as each of these dependent claims includes all the limitations of claim 1 from which they directly or indirectly depend, the citation of Scher et al. in combination with one or more of the secondary references still does not cure the foregoing deficiency of Scher et al. and, therefore, cannot establish a *prima facie* case of obviousness for the claimed invention.

VIII. Conclusion

As the Examiner has failed to identify in the cited art each feature recited by the present claims, or in the alternative, establish why one of ordinary skill in the art would be motivated to modify the prior art, Applicants urge the Examiner committed reversible error in finally rejecting the claims of this application as being anticipated and/or unpatentable over the cited art.

APPENDICES

The following Appendices are attached to and made part of this brief:

Appendix A	Claims on Appeal
Appendix B	Evidence (N/A)
Appendix C	Related Proceedings (N/A)

Respectfully submitted,

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APPENDIX A

Claims on Appeal

1. (Previously Presented) A process for the manufacture of a decorative surface element, which element comprises a base layer, a decor and a wear layer of a UV or electron beam curing lacquer, said process comprising the steps of:

positioning one or more structured rollers or molds on top of the lacquer, the one or more rollers or molds provided with embossing surfaces,

pressing said one or more rollers or molds into ~~on to~~ said lacquer, whereby the lacquer will be provided with a surface structure, thereby enhancing the decorative effect of the decor, and thereafter

completely curing the wear layer.

2-25. CANCELLED

26. (Previously Presented) A process according to claim 1, wherein the lacquer consists of an acrylic or a maleamide lacquer.

27. (Previously Presented) A process according to claim 1, wherein the wear layer is applied in several steps with intermediate partial curing.

28. (Previously Presented) A process according to claim 1, wherein the wear layer includes hard particles with an average particle size in the range 50 nm - 150 μm.

29. (Previously Presented) A process according to claim 1, wherein the base layer consists of a particle board or a fibre board.

30. (Previously Presented) A process according to claim 1, wherein the base layer consists mainly of a polymer.

31. (Previously Presented) A process according to claim 1, wherein the surface element contains a layer which is elastic at least before the complete curing, the elastic layer being selected from the group consisting of the base layer, a primer layer, the decor layer and the wear layer.

32. (Previously Presented) A process according to claim 1, wherein one or more glazing rollers is pressed towards the surface structured wear layer before the complete curing stage.

33. (Previously Presented) A process according to claim 32, wherein the structured rollers are heated to a surface temperature (ST) above 40°C.

34. (Previously Presented) A process according to claim 32, wherein the glazing rollers are heated to a surface temperature (ST) above 30°C.

35. (Previously Presented) A process according to claim 1, wherein a thin top coat is applied on top of the structured wear layer.

36. (Previously Presented) A process according to claim 32, wherein a thin top coat is applied on top of the structured wear layer after the glazing stage.

37. (Previously Presented) A process according to claim 32, wherein a thin top coat is applied on top of the structured wear layer before the glazing stage and that the top coat is partially cured before the glazing.

38. (Previously Presented) A process according to claim 35, wherein the top coat is comprised of acrylic or maleamide lacquer and optionally an additive in the form of hard particles with an average size in the range 50 nm - 10μm.

39. (Previously Presented) A process according to claim 1, wherein each structured roller is provided with a counter stay roller between which the surface element is passed.

40. (Previously Presented) A process according to claim 32, wherein each glazing roller is provided with a counter stay roller between which the surface element is passed.

41. (Previously Presented) A process according to claim 39, wherein the surface element has a thickness T and that the distance between each structured roller and corresponding counter stay is set in the range T minus 0.5mm - 1.2mm.

42. (Previously Presented) A process according to claim 41, wherein the pressure between each structured roller and its corresponding counter stay (P) is 50 - 200 Bar.

43. (Previously Presented) A process according to claim 40, wherein the surface element has a thickness T and that the distance between each glazing roller and corresponding counter stay is set in the range T minus 0.7mm - 1.2mm.

44. (Previously Presented) A process according to claim 43, wherein the pressure between each glazing roller and its corresponding counter stay is 0.1 - 10 Bar.

45. (Previously Presented) A process according to claim 1, wherein the structured surface of the mold is heated to a surface temperature (ST) above 40°C.

46. (Previously Presented) A process according to claim 45, wherein the pressure exercised by the structured mold surface is 50 - 200 Bar.

47. (Previously Presented) A process according to claim 28, wherein the hard particles comprise at least one selected from the group consisting of silicon oxide, α-aluminium oxide and ~~or~~ silicon carbide.

48. (Previously Presented) A process according to claim 28, wherein the main part of the hard particles comprise at least one selected from the group consisting of silicon oxide, α-aluminium oxide and ~~or~~ silicon carbide, while a smaller amount of the hard particles consist of diamond.

49. (Previously Presented) A process according to claim 48, wherein the hard particles consisting of diamond are in the average particle size range of 50nm - 2μm and ~~is~~ are placed close to the upper surface of the wear layer.

50. (Previously Presented) The process according to claim 30, wherein the polymer is polyurethane.

51. (Previously Presented) The process according to claim 41, wherein the distance between each structured roller and corresponding counter stay is in the range T minus 0.7mm - 0.9mm.

52. (Previously Presented) The process according to claim 43, wherein the distance between each structured roller and corresponding counter stay is in the range T minus 0.7mm - 0.9mm.

53. (Previously Presented) The process according to claim 42, wherein the pressure (P) is 65 - 100 Bar.

54. (Previously Presented) The process according to claim 43, wherein the pressure between each glazing roller and its corresponding counter stay (P) is 65 - 100 Bar.

55. (Previously Presented) The process according to claim 46, wherein the pressure (P) is 65 - 100 Bar.

56. (Previously Presented) The process according to claim 45, wherein the temperature (ST) is in the range of 50°C - 150°C.

57. (Previously Presented) The process according to claim 33, wherein the structured rollers are heated to a surface temperature (ST) in the range of 50°C - 150°C.

58. (Previously Presented) A process according to claim 34, wherein the glazing rollers are heated to a surface temperature (ST) in the range of 35°C - 100°C.

APPENDIX B - Evidence

N/A

APPENDIX C - Related Proceedings

N/A